

VENUS MAGNIFICA. *Ven. testâ suborbiculari, subcordatâ, tumidâ aut ventricosâ, solidissimâ, valdè inæquilaterali; margines versùs purpureo tinctâ, umbones versùs albidâ brunneo sparsim maculatâ; lineis concentricis, sulcisque radiantibus decussatâ; lineis, anticè undosis et paulò elevatis, posticè obsoletis, mediò planulatis et sursum spectantibus; sulcis frequentibus, profundis; margine ventrali arcuato, intusque crenato; dorsali, anticè convexo et declivi, posticè convexo et vix declivi; latere postico majore, obtuso; natibus maximè curvatis; pube, lunulâque prominente cordiformi, livido-purpureis; ligamento infosso; superficie internâ albidâ, im-maculatâ; dentibus ut in V. puerperâ.* Long. 5·; lat. 5 poll.

Hab. Ticao, on the sands; Cuming. Mus. Cuming.

This splendid shell is most closely allied to *puerpera*, but the cessation of the concentric ridges on the posterior side, the tinge of purple which environs the whole margin, and the absence of any coloured rays, enable us at once to separate them. The concentric lines gradually become less elevated and more distant towards the lower margin, and finally (in the adult) entirely disappear. The radiating sulci in aged specimens are so broad at their extremity as to give the interstitial spaces the appearance of costellæ.

ON THE LARUS CAPISTRATUS, TEMM.

At the meeting of the Zoological Society, May 27, Mr. W. Thompson read a paper to prove that the *Larus capistratus*, Temm., is not a distinct species from *L. ridibundus*, and exhibited a series of specimens of both forms in different states of plumage obtained in the neighbourhood of Belfast. The differences between these supposed species are—

1st. In size; but a female specimen of *L. ridibundus*, with black hood, bill and legs arterial blood-red, was exhibited, agreeing in the size of body, tarsi, &c. with *L. capistratus*.

2nd. The colour of the tarsi and toes attributed to *L. capistratus*, and as distinguishing it from *L. ridibundus*, is a mere transition shade, through which all individuals of the latter pass before the arterial blood-red hue is attained.

3rd. The disposition of black or brown on the head, its taking the form of a mask, as in *L. capistratus*, or as a hood, as in *L. ridibundus*, is either transitional or accidental*, and the shade of colour commonly varies from the "broccoli-brown" of the former to the deeper tint of the ordinary *L. ridibundus*.

A specimen of the *L. capistratus*, purchased at the sale of Bullock's collection by Dr. Leach, and believed to have been one of the first birds seen by Temminck, to which he gave this name, is now in the British Museum. By the kindness of Mr. George R. Gray, the author was enabled to make a critical comparison of this bird with the specimens exhibited, and, excepting in the smaller size of the toes and webs of feet, there was no difference between it and some of them;

* Mr. Thompson stated that he had known it to be both transitional and accidental, i. e. for birds to exhibit the mask the *first* summer of their attaining adult plumage, and others the *second* in their first assumption of the black hood.

and from the adult female, *L. ridibundus*, in full summer plumage it differed in the most trivial manner only.

ON THE DISEASE OF POTATOES. BY PROF. KÜTZING.

The diseases of potatoes have of late years attained so unusual an extent of diffusion, that their investigation must become of universal importance, especially when we recollect that this is the only means of ascertaining the cause of the disease.

During the present year a disease has appeared in the potatoes growing around Nordhausen with which the author of this communication was not previously acquainted; nor is it mentioned in the writings which have in modern times treated of the diseases of potatoes.

It is of a totally different nature from the so-called dry-rot (caries of the tubers), in which the starch granules become so altered as to exhibit minute brown fungi similar to those of corn-smut, and the cellular tissue which surrounds these bodies becomes destroyed or dissolved at a subsequent period only. In the disease of the present year an alteration and solution of the cellular tissue alone is visible, the starch granules remaining within it in a sound and unaltered state. For this reason I have called it cell-rot.

The cell-rot at first appears just beneath the cuticle of the tubers, and always extends from thence towards the interior. It constantly commences with a brownish discoloration of the substance, which at first is still firm and solid, but gradually assumes a lighter and darker colour until it is dissolved and forms a greasy, soft, dark brown (sometimes verging to violet) mass, which possesses a fœtid odour.

On microscopic examination perfectly healthy starch granules may be detected in all the stages of the disease, a proof that the true nutritious ingredient is not destroyed by this change. But the cells, which contain these starch granules, and which in the healthy substance are clear, colourless and extraordinarily transparent, even in the earliest stage of the disease appear of a yellowish colour, and the membrane exhibits a finely granular structure which impairs their transparency. As the disease progresses the colour and granular structure of the surface of the cells increase, until at last they are either partially or completely dissolved, the starch granules pass out of them and become mixed with the decomposed mass. At this period we find in the fluid decomposed cellular mass a fine filamentous fungus, which frequently extends to the surface of the diseased cells, and is diffused through the soft mass in a ramified form or united into bundles. Its formation, as I have satisfactorily observed, is a consequence of the decomposition of the cells, for it is not present in the earliest stage of the disease.

The cause of this disease appears to depend partly upon too great an amount of moisture, partly on too copious a supply of manure to the soil: both induce too rapid a growth of the tubers, which renders the formation of a strong and durable cellular membrane impossible. Moreover, all the potatoes which have experienced the cell-rot contain a much larger amount of aqueous constituents than the sound ones. It may be expected that the disease of the tubers which are laid up for winter store will extend itself and finally destroy them,